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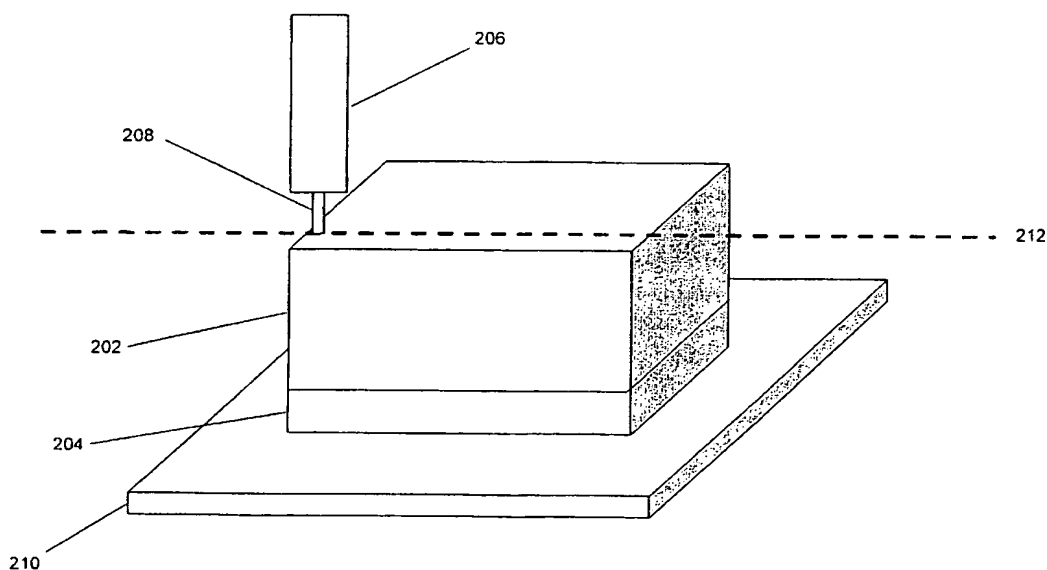
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(54) Title: **SYSTEM AND METHOD FOR LASER WELDING FOILS**



(57) Abstract: A method and apparatus, for welding together a pair of metal foils of different thickness. The method includes the steps of positioning a thin metal foil adjacent a thick metal foil and applying a continuous wave laser beam to the thick metal foil to weld at least a portion of the thick metal foil and the thin metal foil together. A thermally conductive plate is positioned proximate the weld line in order to limit the thick foil melt pool and to function as a laser beam block. Accordingly, appropriate materials may be chosen for the foils and top plate so that the continuous wave laser beam couples optimally into the thick foil material and minimally into the top plate material. A thermocouple may be placed proximate the weld line to obtain measures of temperature used to vary the laser beam power and/or the slew rate.

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